

## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application. Applicant has submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

## Listing of Claims:

Claims 1-42 (Canceled)

Claim 43 (Currently Amended) A method for enabling outside-initiated traffic flows over a network and through a network address translator from an outside device to a device behind the network address translator, the method performed by the device behind the network address translator, the method comprising:

creating a hole-punching-message addressed to a remote ~~the outside~~ device and configured to enable [[a]] ~~the~~ network address translator to create an address mapping, ~~the message further configured to be discarded by the network or the outside device;~~  
and

sending the hole-punching-message such that the ~~hole-punching~~ message is processed by the network address translator[[,]] such that the address mapping is created, and such that the outside device can initiate a traffic flow with the inside device via the network address translator and the address mapping; and

wherein any further disposition of the hole-punching message after the address mapping is created is immaterial.

Amendment  
Application Number: 09/955,525  
Attorney Docket Number: 171328.01

Claim 44 (Currently Amended) The method of claim 43 wherein the ~~hole-punching~~ message includes a NULL content field is formatted so as to be harmless.

Claim 45 (Previously Presented) The method of claim 43 further wherein the network address translator is a plurality of network address translators coupled in series.

Claim 46 (Currently Amended) The method of claim 43 wherein the creating and the sending of the ~~hole-punching~~ message is initiated by a network communications stack.

Claim 47 (Currently Amended) The method of claim 43 wherein the creating and the sending of the ~~hole-punching~~ message is initiated by a program.

Claim 48 (Currently Amended) The method of claim 43 wherein the ~~remote~~ outside device is behind an additional network address translator.

Claim 49 (Previously Presented) The method of claim 43 wherein the method is embodied in computer-executable instructions stored on computer-readable media.

Claim 50 (Currently Amended) A method performed by a program operating on a local device coupled to a network, the method comprising:

creating a ~~hole-punching~~-message addressed to a remote device and configured to be discarded by the network or the remote device;

configuring the ~~hole-punching~~-message to enable a network address translator to create a unique address mapping; and

sending the ~~hole-punching~~-message such that the message is received and processed by the network address translator such that the unique address mapping is created, such that a subsequent unsolicited communication sent from the remote device to the program via the network address translator is forwarded to the program utilizing the unique address mapping; and

~~wherein the hole-punching message is received and processed by the network address translator such that the unique address mapping is created, such that a subsequent unsolicited communication sent from the remote device to the program via the network address translator is forwarded to the program utilizing the unique address mapping.~~

Claim 51 (Currently Amended) The method of claim 50 further comprising:  
creating an additional ~~hole-punching~~-message for each of a plurality of additional programs, each of the additional ~~hole-punching~~-messages being addressed to the remote device and configured to be discarded by the network or the remote device;

configuring each of the additional ~~hole-punching~~-messages to enable the network address translator to create an additional unique address mapping for each of the plurality of additional programs; and

sending each of the additional messages such that each of the additional messages are received and processed by the network address translator such that the additional unique address mappings are created for each of the plurality of additional programs, such that a subsequent unique unsolicited communication sent from the remote device to each of the plurality of additional programs via the network address translator is forwarded to each of the plurality of additional programs utilizing each of the additional unique address mappings;

~~—wherein each of the additional-hole-punching-messages are received and processed by the network address translator such that the additional-unique-address mappings are created for each of the plurality of additional programs, such that a subsequent unique-unsolicited communication sent from the remote device to each of the plurality of additional programs via the network address translator is forwarded to each of the plurality of additional programs utilizing each of the additional-unique address mappings.~~

Claim 52 (Currently Amended) The method of claim 65 wherein the message is formatted using User Datagram Protocol-51 wherein the ~~hole-punching message and each of the additional hole-punching-messages are formatted so as to be harmless.~~

Claim 53 (Previously Presented) The method of claim 51 further wherein the network address translator is a plurality of network address translators coupled in series.

Claim 54 (Previously Presented) The method of claim 51 wherein the remote device is behind an additional network address translator.

Claim 55 (Previously Presented) The method of claim 51 wherein the method is embodied in computer-executable instructions stored on computer-readable media.

Claim 56 (Previously Presented) The method of claim 50 wherein the method is embodied in computer-executable instructions stored on computer-readable media.

Claim 57 (Previously Presented) The method of claim 50 wherein the unique address mapping includes a public address of the remote device.

Claim 58 (Previously Presented) The method of claim 50 wherein the unique address mapping includes a private address of the local device.

Claim 59 (Previously Presented) The method of claim 50 wherein the unique address mapping is operative for communications formatted using Transmission Control Protocol.

Claim 60 (Previously Presented) The method of claim 50 wherein the unique address mapping is operative for communications formatted using User Datagram Protocol.

Claim 61 (Previously Presented) The method of claim 50 wherein the unique address mapping is stored on the network address translator.

Claim 62 (Previously Presented) The method of claim 50 wherein the local device is coupled to the network address translator via a private network.

Claim 63 (Previously Presented) The method of claim 50 wherein the network address translator is coupled to the remote device via the Internet.

Claim 64 (Currently Amended) The method of claim 50 wherein the message is discarded after the creation of the unique address mapping ~~whatever happens with the hole-punching message subsequent to the creation of the unique address mapping is immaterial.~~

Claim 65 (Currently Amended) The method of claim 50 wherein the ~~hole-punching~~ message is formatted to include a NULL content field.

Claim 66 (Currently Amended) The method of claim 65 wherein the ~~hole-punching~~ message is formatted using Transmission Control Protocol ~~or User Datagram Protocol~~.

Claim 67 (Currently Amended) A local device coupled to a network, the local device comprising:

a program for communicating with a remote device;

a network communication means for receiving and replying to an unsolicited communication from the remote device, the program being coupled to the remote device via the network and a network address translator; and

a message creation means coupled to the network communication means and configured operable to create a ~~hole-punching~~-message addressed to the remote device, the message configured to be discarded by the network or the remote device, the ~~hole-punching~~-message sent by the communication means and received and processed by the network address translator such that a unique address mapping is created, such that the remote device can initiate the unsolicited communication with the program via the network address translator and the unique address mapping; and  
~~wherein any further disposition of the hole-punching method after the unique address mapping is created is immaterial.~~

Claim 68 (Previously Presented) The local device of claim 67 wherein the unsolicited communication is formatted using Transmission Control Protocol or User Datagram Protocol.

Claim 69 (Currently Amended) The local device of claim 67 wherein the message is discarded after the creation of the unique address mapping ~~68 embodied as computer-executable instructions on a computer-readable medium.~~